

Louisiana Office of Public Health Laboratories	
Test Name	Rule out <i>Francisella tularensis</i>
PHL Location	Office of Public Health Laboratory Baton Rouge
CPT Code	N/A
Synonyms	BT Test, Bioterrorism Test, Clinical Rule Out
Brief Description of Test	<p>To rule out or confirm bacterial isolates as <i>F. tularensis</i> or to rule out or confirm presence/absence of <i>F. tularensis</i> in direct patient specimens.</p> <p><i>F. tularensis</i> is suspected and cannot be ruled out if the isolate fulfills the following characteristics:</p> <ul style="list-style-type: none"> • Tiny, faintly staining Gram-negative coccobacillus • MAC—No Growth • BAP—Scant growth • Oxidase – negative • Catalase – negative (or weakly positive) • Satellite growth – negative • β-lactamase – positive
Possible Results	<p>Direct Sample Testing Presumptive Positive Inconclusive Negative</p> <p>Culture Isolate Testing Presumptive Positive Positive Negative</p>
Reference Range	Negative/Not Detected
Specimen Type	Direct Sample

	A. Collection and Transport of Clinical Specimens for Laboratory Rule-Out Testing	
	Tissue Biopsy, scraping of an ulcer, or conjunctival swab	<ul style="list-style-type: none"> For small tissue samples, add several drops of sterile normal saline into a sterile container to keep the tissue moist Transport at room temperature for immediate processing If processing of specimen is delayed beyond 2 hours, keep specimen chilled (2-8°C) Amies transport media is an appropriate transport medium
	Aspirate Lymph node or lesion	<ul style="list-style-type: none"> Submit in a sterile container Transport at room temperature for immediate processing. If processing of specimen is delayed beyond 2 hours, keep specimen chilled (2-8°C)
	Bone Marrow	<ul style="list-style-type: none"> Submit in a sterile container Transport at room temperature for immediate processing If processing of specimen is delayed beyond 2 hours, keep specimen chilled (2-8°C)
	Blood	<ul style="list-style-type: none"> Transport inoculated bottles directly to laboratory at room temperature Hold at room temperature until placed into automated, continuous monitoring blood culture incubators Do not refrigerate
	Respiratory Secretions	<ul style="list-style-type: none"> Submit in a sterile container Transport at room temperature for immediate processing If processing of specimen is delayed beyond 2 hours, keep specimen chilled (2-8°C)
	Serum	<ul style="list-style-type: none"> Collect at least 1 ml without anticoagulant for serologic diagnosis Store at 4°C until testing is performed. Acute specimen is collected as soon as possible after onset of disease Convalescent-phase should be collected >14 days after the acute specimen.
	Culture Isolate Actively growing, pure culture inoculated in/on unexpired media	
Specimen Container(s):	Specimen must be transported in “triple” packaging (primary receptacle, water tight secondary packaging and durable outer packaging) required for a biological agent of human disease.	
Minimum volume accepted:	1mL of blood or body fluid, 0.1g of tissue Serum samples would be sent to LRN for serology testing Although biopsied tissue or scraping of an ulcer is preferable, a swab of the ulcer is an acceptable alternative.	
Collection Instructions	<p>These procedures should be performed in microbiology laboratories that utilize Biological Safety Level 2 (BSL-2) practices; use of biological safety cabinet is recommended. Because of the highly infectious nature of this organism (BSL-3) the state public health laboratory/department should be consulted immediately if tularemia is suspected.</p> <p>BSL-3 practices, containment equipment, and facilities are recommended, for all manipulations of cultures of pathogenic <i>F. tularensis</i>.</p> <p>Blood: Transport directly to laboratory at room temperature. Hold at room temperature until placed onto the blood culture instrument or incubator. Do not refrigerate. Follow established laboratory protocol for processing blood cultures.</p>	

	<p>Biopsy: Submit tissue, scraping, or aspirate in a sterile container. For small tissue samples, add several drops of sterile normal saline to keep the tissue moist. Transport at room temperature for immediate processing. If processing of specimen is delayed, keep specimen chilled (2-8° C).</p> <p>Swabs: Obtain a firm sample of the advancing margin of the lesion. If using a swab transport carrier, the swab should be reinserted into the transport package and the swab fabric moistened with the transport medium inside the packet. Transport at 2-8° C; room temperature is acceptable. If processing of specimen is delayed, keep specimen chilled (2-8° C).</p> <p>Serum and other body fluid samples should be shipped at 2-8°C, on cold packs (wet ice if necessary).</p> <p>Package such that each sample is kept separate and is individually labeled, contained in its own bag/container and labeled with a unique identifier.</p> <p>Decontamination of laboratory surfaces is easily accomplished using a fresh solution of 10% bleach.</p> <p>Label specimen with Patient Name and a 2nd Unique Identifier such as a chart number or medical record number. DOB is not considered unique.</p> <p>Complete a LAB Form 93 to accompany the sample. Lab submission form must be thoroughly completed with patient's first and last name, 2nd patient identifier, gender, date of birth, date and time of collection, specimen source, test requested, submitter's name, address, fax and contact number. Additional information regarding patients' address is requested.</p> <p>Transport specimen to laboratory as soon as possible after collection/incubation. Keep submission forms insulated from specimens.</p>
Storage and Transport Instructions	<p>Send sample to the Office of Public Health Laboratory Baton Rouge, 1209 Leesville Avenue, Baton Rouge, LA 70802</p> <p>LRN (Laboratory Response Network) guidance for the packaging and shipping of infectious substances and biological agents should be consulted for recent changes. IATA and DOT publications continue to be revised frequently. Submitters should frequently and regularly consult IATA publications, the Federal Register, and the publications of other governing agencies for more complete instructions. It is the shipper's responsibility to ensure adherence to the most current regulations.</p> <p>Useful web sites that address the shipping of infectious substances and biological agents:</p> <p>International Air Transport Association: https://www.iata.org</p> <p>Department of Transportation: http://phmsa.dot.gov</p> <p>American Society for Microbiology: http://www.asm.org</p> <p>American Biological Safety Association: http://www.absa.org/</p> <p>Animal and Plant Health Inspection Service: http://www.aphis.usda.gov/</p> <p>Centers for Disease Control and Prevention: http://www.cdc.gov/od/ohs/</p>

Causes for Rejection	Two unique identifiers MUST be recorded on the specimen AND the Lab 93 form. A missing identifier on the tube will be an automatic rejection. If the identifiers are missing from the lab form, the submitter must be contacted and a new form with this information must be faxed back to the lab before testing/reporting will take place.
Limitations of the Procedure	<p>If inhibitors are present in a DNA extraction, PCR assays may produce a false negative result.</p> <p>A false negative result may occur if a sample is improperly collected, transported or handled. False negative results may occur if inadequate numbers of organisms are present in the sample.</p>
Interfering Substances	N/A for direct culture testing
References	<p>Sentinel Level Clinical Laboratory Guidelines for Suspected Agents of Bioterrorism and Emerging Infectious Diseases – <i>Francisella tularensis</i>. http://www.asm.org/images/PSAB/LRN/Tularemia316.pdf Laboratory Response Network</p>
Additional Information	If <i>Francisella tularensis</i> . is suspected, contact Infectious Disease Epidemiology at 1-800-256-2748.
Release Date	5/15/2016
Warning: If you have printed a copy of this information please be advised that the Louisiana Office of Public Health Laboratories website and methods are updated on a regular basis. Please check the on-line version of this document to ensure you are relying on the most recent release.	